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UNITED STATES PATENT AND TRADEMARK OFFICE

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BEFORE THE BOARD OF PATENT APPEALS  
AND INTERFERENCES

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*Ex parte* JOHN ERIC ARNOLD and  
MARK GUY TROWBRIDGE

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Appeal 2008-0276  
Application 10/009,696  
Technology Center 3600

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Decided: March 18, 2008

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Before MURRIEL E. CRAWFORD, HUBERT C. LORIN, and  
MICHAEL W. O'NEILL, *Administrative Patent Judges*.

O'NEILL, *Administrative Patent Judge*.

DECISION ON APPEAL

STATEMENT OF THE CASE

Arnold, et al. (Appellants) seek our review under 35 U.S.C. § 134 of the final rejection of claims 1-9, 12, 14, and 16-20. We have jurisdiction under 35 U.S.C. § 6(b) (2002).

## SUMMARY OF DECISION

We AFFIRM-IN-PART.<sup>1</sup>

## THE INVENTION

The claimed invention is directed to an airspring and a retainer therefor.

Claims 1, 12, 16, 17, and 20, reproduced below, are representative of the subject matter on appeal.

1. An airspring (10) comprising a flexible cylindrical sleeve (14) secured at opposing ends, and first and second retainers (12, 26), the sleeve being secured at a first end to one of the retainers (12 or 26), and at the opposing end to other retainer (26 or 12), the improvement being characterized by:

one of the retainers (26) having a bumper-contact surface (52) within the sleeve (14) for axial movement into the sleeve (14), the bumper-contact surface formed as a part of the retainer and which contacts the other retainer (12) when the airspring is collapsed, and absorbs and transmits forces generated from such contact, the bumper contact surface (52) being centrally located on the surface of the

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<sup>1</sup> Our decision will make reference to Appellants' Appeal Brief ("Br.," filed Jan. 30, 2006) and the Examiner's Answer ("Answer," mailed Apr. 11, 2006).

retainer (26) which extends into the sleeve (14) during axial movement into the sleeve (14).

16. An airspring (10) comprising a flexible cylindrical sleeve (14) secured at opposing ends, a chamber (20) created by the secured sleeve (14), a piston (28), and first and second retainers (12, 26), the sleeve being secured at a first end to one of the retainers (12 or 26), and an opposing end of the sleeve (14) being secured between the piston (28) and the other retainer (26 or 12), wherein:

one of the retainers (26) has a centrally located axially outer surface (52), the axially outer surface (52) extends into the chamber (20) during axial movement, wherein the axially outer surface (52) of the retainer (26) contacts the other retainer (12) when the airspring is collapsed.

17. An airspring in accordance with claim 16 wherein the retainer that extends into the chamber (20) has support ribs (34, 40, 42, 44, 48).

12. An airspring (10) in accordance with claim 17 wherein the retainer comprising support ribs has more than two concentrically disposed ribs.

20. An airspring in accordance with claim 16 wherein the airspring has no separately formed and applied bumper on either retainer.

## THE PRIOR ART

The Examiner relies upon the following as evidence of unpatentability:

Koschinat	US 4,890,823	Jan. 02, 1990
Ecktmann	US 5,201,500	Apr. 13, 1993

## THE REJECTIONS

The following rejections are before us for review:<sup>2</sup>

Claim 12 is rejected under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter of the invention.

Claims 1-5, 7, 12, and 16-19 are rejected under 35 U.S.C. § 102(b) being anticipated by Ecktmán.

Claim 6, 14, and 20 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Ecktmán.

## ISSUES<sup>3</sup>

The first issue is whether the Appellants have shown that the Examiner erred in rejecting claim 12 as being indefinite. The second issue is whether the Appellants have shown that the Examiner erred in rejecting claims 1-5, 7, 12, and 16-19 as being anticipated by Ecktmán. The third issue is whether the Appellants have shown that the Examiner erred in rejecting claim 20 as unpatentable over Ecktmán.

The first issue turns on whether claim 12 sets out and circumscribes a particular area with a reasonable degree of precision and particularity when

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<sup>2</sup> The Appellants have not argued the propriety of the Examiner's rejection of claims 8 and 9 under 35 U.S.C. § 103(a) as being unpatentable over Ecktmán and Koschinat. As such, this rejection is not before us for review.

<sup>3</sup> Only those arguments actually made by Appellants have been considered in this decision. Arguments that Appellants could have made but chose not to make in the Briefs have not been considered and are deemed to be waived. *See* 37 C.F.R. § 41.37(c)(1)(vii) (2007).

read in light of the Specification. The second issue turns on whether the claims as properly interpreted require the surface that contacts a second retainer is formed as part of a first retainer. The third issue turns on whether the claimed combination of elements is more than the predictable use of prior art elements according to their established functions.

### FINDINGS OF FACT

We find that the following enumerated findings of fact are supported by at least a preponderance of the evidence. *Ethicon, Inc. v. Quigg*, 849 F.2d 1422, 1427 (Fed. Cir. 1988) (explaining the general evidentiary standard for proceedings before the Office).

1. Ecktman discloses an improved internal bumper for an airspring. (Ecktman, col. 1, ll. 6-10.) The bumper 20 is mounted on the base 4 of piston 3 and extends upwardly therefrom into chamber 15. Bumper 20 engages end cap in case of failure or assists in absorption of excessive shock forces. (Ecktman, col. 3, ll. 56-62.)
2. Bumper 20 is formed of a high strength polyester elastomer or plastic. (Ecktman, col. 4, ll. 60-61.)
3. Bumper 20 includes inner and outer cylindrical walls 23 and 24 that are concentrically arranged. An integral dome-shaped connecting top wall 25 connects the walls. In addition, a plurality of radially extending and reinforcing ribs 26 and 27 are formed integrally with the walls. Inner wall 23 terminates at base 29, while outer wall terminates at base 30. In all, an integrally rigid one-piece bumper member is formed. (Ecktman, col. 3, l. 63 to col. 10.)

4. Plate 12 is secured in a fluid tight clamping relationship with  
airspring's sleeve bead 11 by a threaded stud 32 that extends through  
an opening 33 through base 4 of piston 3 and is threaded into end cap  
34. End cap 34 is secured to plate 12 by brazing at point 35. The  
interior of cap 34 has a threaded bore 37 for connection with stud  
threads 38 of stud 32. As such, a central bumper attachment post 36 is  
formed. (Ecktmann, col. 4, ll. 11-19.)
5. Ecktmann's construction of bumper 20 enables the bumper 20 to be  
easily installed on center post 36 by snap-fitting the bumper vertically  
downward over the enlarged end 39 of the post 36. In this  
installation, flexible fingers 43 on bumper 20 snap into position under  
undercut 40 formed beneath enlarged end 39. (Ecktmann, col. 5, ll. 3-  
9.)

#### PRINCIPLES OF LAW

“The Patent and Trademark Office (“PTO”) determines the scope of claims in patent applications not solely on the basis of the claim language, but upon giving claims their broadest reasonable construction ‘in light of the specification as it would be interpreted by one of ordinary skill in the art.’ *In re Am. Acad. of Sci. Tech. Ctr.*, 367 F.3d 1359, 1364 (Fed. Cir. 2004).” *Phillips v. AWH Corp.*, 415 F.3d 1303, 1316 (Fed. Cir. 2005). “The problem is to interpret claims ‘in view of the specification’ without unnecessarily importing limitations from the specification into the claims.” *E-Pass Techs., Inc. v. 3Com Corp.*, 343 F.3d 1364, 1369 (Fed. Cir. 2003). In other words, care must be taken not to read a particular embodiment appearing in the written description into the claim if the claim language is

broader than the embodiment. *See Superguide Corp. v. DirectTV Enterprises, Inc.*, 358 F.3d 870, 875 (Fed. Cir. 2004)

Though understanding the claim language may be aided by the explanations contained in the written description, it is important not to import into a claim limitations that are not a part of the claim. For example, a particular embodiment appearing in the written description may not be read into a claim when the claim language is broader than the embodiment.

Although a patent applicant is entitled to be his or her own lexicographer of patent claim terms, in *ex parte* prosecution it must be within limits. *In re Corr*, 347 F.2d 578, 580 (CCPA 1965). The applicant must do so by placing such definitions in the Specification with sufficient clarity to provide a person of ordinary skill in the art with clear and precise notice of the meaning that is to be construed.

The test for compliance with respect to 35 U.S.C. § 112, second paragraph, is whether the claims set out and circumscribe a particular area with a reasonable degree of precision and particularity when read in light of the application disclosure as they would be interpreted by one of ordinary skill in the art. *In re Moore*, 439 F.2d 1232, 1235 (CCPA 1971).

Anticipation is a question of fact. *In re Schreiber*, 128 F.3d 1473, 1477 (Fed. Cir. 1997). Anticipation is determined by first construing the claims and then comparing the properly construed claims to the prior art. *In re Cruciferous Sprout Litigation*, 301 F.3d 1343, 1346 (Fed. Cir. 2002). The law of anticipation does not require that the prior art reference teach the Appellants' purpose disclosed in the Specification, but only that the claims



on appeal “read on” something disclosed in the prior art reference. *See Kalman v. Kimberly-Clark Corp.*, 713 F.2d 760, 772 (Fed. Cir. 1983).

“Section 103 forbids issuance of a patent when ‘the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains.’” *KSR Int’l Co. v. Teleflex Inc.*, 127 S.Ct. 1727, 1734 (2007). The question of obviousness is resolved on the basis of underlying factual determinations including (1) the scope and content of the prior art, (2) any differences between the claimed subject matter and the prior art, (3) the level of skill in the art, and (4) where in evidence, so-called secondary considerations. *Graham v. John Deere Co.*, 383 U.S. 1, 17-18, (1966). *See also KSR*, 127 S.Ct. at 1734 (“While the sequence of these questions might be reordered in any particular case, the [*Graham*] factors continue to define the inquiry that controls.”)

“In *KSR*, the Supreme Court emphasized “the need for caution in granting a patent based on the combination of elements found in the prior art,” 127 S.Ct. at 1739, and discussed circumstances in which a patent might be determined to be obvious without an explicit application of the teaching, suggestion, motivation test. As such, the Supreme Court has addressed this overly rigid and formalistic application of the teaching-suggestion-motivation (TSM) test and rejected it. *Id.*

Instead, the Supreme Court emphasized that “the principles laid down in *Graham* reaffirmed the ‘functional approach’ of *Hotchkiss*, 11 How. 248.” *KSR*, 127 S.Ct. at 1739 (citing *Graham v. John Deere Co.*, 383 U.S. at 12

(emphasis added)), and reaffirmed principles based on its precedent that “[t]he combination of familiar elements according to known methods is likely to be obvious when it does no more than yield predictable results.” *Id.* The Court explained:

When a work is available in one field of endeavor, design incentives and other market forces can prompt variations of it, either in the same field or a different one. If a person of ordinary skill can implement a predictable variation, §103 likely bars its patentability. For the same reason, if a technique has been used to improve one device, and a person of ordinary skill in the art would recognize that it would improve similar devices in the same way, using the technique is obvious unless its actual application is beyond his or her skill.

*Id.* at 1740. The operative question in this “functional approach” is thus “whether the improvement is more than the predictable use of prior art elements according to their established functions.” *Id.*

With this as background, we analyze the specific rejections made by the Examiner of the claims on appeal.

## ANALYSIS

The Appellants argue claims 1, 16, and 20 for the grounds of rejections with respect to anticipation and obviousness. The Appellants argue claim 12 for the indefiniteness ground of rejection.

As such, we select claim 1 as the representative claim for claims 2-5 and 7 and claim 16 as the representative claim for claims 12 and 16-19 for the grounds of rejection with respect to anticipation, claim 20 as the

representative claim for the ground of rejection with respect to obviousness, claim 12 as the representative claim for the ground of rejection with respect to indefiniteness.

As such, claims 2-7, 14, and 17-19 will stand or fall with the respective representative claims for each group. 37 C.F.R. § 41.37(c)(1)(vii) (2007).

In reaching our decision in this appeal, we have given careful consideration to the Appellants' Specification and claims, to the applied prior art references, and to the respective positions articulated by the Appellants and the Examiner.

Upon evaluation of all the evidence before us, it is our conclusion that the evidence adduced by the Examiner is not sufficient to establish a case of indefiniteness with respect to claim 12. As such, we will not affirm the Examiner's decision to reject claim 12 for being indefinite.

Upon evaluation of all the evidence before us, it is our conclusion that the evidence adduced by the Examiner is not sufficient to establish a case of anticipation with respect to claims 1-5 and 7. As such, we will not affirm the Examiner's decision to reject claims 1-5 and 7 as being anticipated by the prior art.<sup>4</sup>

Upon evaluation of all the evidence before us, it is our conclusion that the evidence adduced by the Examiner is sufficient to establish a case of anticipation and a prima facie case of obviousness with respect to claims 12

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<sup>4</sup> Claim 8 depends from claim 1 and claim 9 depends from claim 8. These claims have been rejected as obvious over Ecktmann and Koschinat. The Brief lacks providing an argument identifying where the Examiner erred. As stated *supra*, this rejection is not before us for review.

and 16-20. Accordingly, we will affirm the Examiner's decision to reject these claims under 35 U.S.C. §§ 102 and 103. When the claims are given their broadest reasonable construction in light of the Specification as it would be interpreted by one of ordinary skill, we find the Appellants have not shown the Examiner erred in rejecting representative claims 16 and 20 with Ecktman.

Our reasoning for this determination follows.

#### *Claim analysis*

Claim 1 has as a limitation "the bumper-contact surface formed as a part of the retainer." The Specification identifies the "retainer 26 is a single piece, replacing the conventional separate lower retainer and bumper of the prior art." (Spec. p. 4, ll. 26-27.) The Specification discloses the "retainer 26 has a surface 52 which extends into the chamber 20." (Spec. p. 5, l. 9.) The Specification teaches "[t]he surface 52, [is] also know as the bumper-contact surface." (Spec. p. 5, l. 10.) One of ordinary skill in the art reading the claim in light of the Specification would understand the claimed phrase "formed as part of a retainer" as characterizing a retainer 26 in a single-piece construction.

In contrast thereto, claim 16 does not limit a surface and retainer to a one-piece construction. Instead, claim 16 requires a retainer to have a centrally located axially outer surface that will extend into the chamber during axial movement and where this surface would contact the retainer when the airspring is collapsed.

*Rejection under 35 U.S.C. § 112, second paragraph*

We have reviewed claim 12. When the claim is read in light of the Specification the claim sets out and circumscribes a particular area with a reasonable degree of precision and particularity. In this case, claim 12 sets out and circumscribes with a reasonable degree of precision that the support ribs of the retainer have more than two concentrically disposed ribs.

*Rejection of Claim 1*

We will not affirm the Examiner's decision to reject claim 1 as being anticipated by Ecktmann. Our findings conclude that Ecktmann does not disclose a bumper-contact surface and retainer formed as a single-piece. Instead, the bumper-contact surface, the bumper 20, and the retainer, the plate 12, are of a multi-piece construction. (See Finding of Facts 1-5.)

*Rejection of Claim 16*

As stated *supra*, a particular embodiment appearing in the written description may not be read into a claim when the claim language is broader than the embodiment. As the claim is properly interpreted the claim only requires a retainer having a centrally located axially outer surface that extends into the chamber during axial movement and would contact the other retainer. As claimed, the "axially outer surface" of the retainer structure that contacts the other retainer does not have to be formed as part of the retainer, i.e., it is not limited to being one-piece. As such, the claim reads on Ecktmann's disclosure of a retainer, the plate 12, having a centrally

located axially outer surface, the bumper 20, where the outer surface, the bumper 20, extends into the chamber 15 during axial movement and contacts the other retainer, the cap 2, when the airspring 1 is collapsed. (See Finding of Facts 1, 3, and 4.) As such, we disagree with the Appellants that Ecktman lacks disclosing a retainer having a surface extending into the chamber and contacting the other retainer, see Appeal Brief on page 7.

The Appellants state that

Contrary to Appellants' claims that recite that a portion of the sleeve end securing retainer both enters into the chamber and contacts the opposing retainer when the airspring is collapsed, due to the bowl shape of the lower retainer plate 12 of Ecktman et al, no portion of the plate 12 of Ecktman et al enters into the air chamber (Figure 2), nor can any portion of the retainer plate 12 contact the opposing retainer 2 when the airspring is collapsed.

(Br. 6-7.) This statement is not persuasive because the statement assumes that one skilled in the art would identify only plate 12 as the retainer and exclude other structures as part of the retainer. As discussed *infra*, the record lacks evidence that one skilled in the art would identify the plate 12 as only the retainer. In fact, from Ecktman, the evidence teaches a retainer is made from multiple pieces. (Finding of Fact 4.) In addition, the claim lacks reciting a limitation that a portion of the sleeve end securing retainer both enters into the chamber and contacts the opposing retainer when the airspring is collapsed. Instead, the claim recites a retainer has an outer surface, the outer surface extends into the chamber, and the outer surface contacts the other retainer. Because the contention is not commensurate in scope with claim, the contention is also not persuasive.

The Appellants' contention that one skilled in the art would understand that Ecktmann's plate 12 is identified as a retainer, Appeal Brief on page 7, is also not persuasive, because as stated *supra*, the contention assumes one skilled in the art would identify only plate 12 as the retainer. In other words, the contention is based on Appellants' attorney's arguments about what one of ordinary skill in the art understands a retainer to mean.

There is no evidence in the record that one of ordinary skill in the art would understand only plate 12 is a retainer. The Specification does not state what one skilled in the art would understand what structure constitutes a retainer. The Appellants have provided no evidence of what one skilled in the art would understand what structure would constitute a retainer. Further, the record does not provide any evidence that one of ordinary skill in the art would understand a structure identified as a retainer has to automatically be formed from a single piece. As such, the term retainer does not preclude a structure identified as a retainer by the Examiner being composed of more than one piece. Appellants' attorney's arguments in a brief cannot take the place of evidence. *In re Pearson*, 494 F.2d 1399, 1405 (CCPA 1974). *See also In re De Blauwe*, 736 F.2d 699, 705 (Fed. Cir. 1984).

#### *Rejection of claim 20*

Both the Appellants and the Examiner agree that all of the claimed elements are taught within Ecktmann. (Br. 8 and Answer 7.) As stated *supra*, the issue of obviousness turns on whether the improvement is more than the predictable use of prior art elements according to their established functions and not whether it is obvious to make something unitary that is known in the

art as being made of multiple pieces. (See Br. 8-9.) In this case, the Appellants have failed to provide evidence that the combination of claimed elements found in the art as separate elements when combined into a single invention yield an unpredictable result. Based on the record, it appears that the structure identified as the retainer performs the established function of maintaining a fluid tight seal, the structure identified as the axially outer surface performs the established function of preventing the two retainers making contact in case of chamber failure or absorbing excessive forces, and the structure identified as the airspring having “no separately formed and applied bumper on either retainer” performs the established function of providing cushioning between two moving parts. As such, each of these claimed elements are taught within Eckman and each element within this combination operates in accordance with its known function. As stated by the Supreme Court in *KSR*: “when a patent ‘simply arranges old elements with each performing the same function it had been known to perform’ and yields no more than one would expect from such an arrangement, the combination is obvious.” *KSR*, 127 S.Ct. 1740 (quoting *Sakraid v. Ag Pro, Inc.*, 425 U.S. 273 (1976)).

Further, the Appellants have provided no evidence of secondary considerations for us to consider their statements “Appellants took two elements conventionally formed of different materials and determined how the structure could be formed of a single material and how the structure had to be modified in order to absorb forces and function similar to the conventional separate elements of separate materials.” (App. Br. 9.) And, more than just routine skill was used to create the invention. (App. Br. 9.)



As such, we are not persuaded that more than routine skill was needed to create the invention.

### CONCLUSIONS OF LAW

We conclude that the Appellants have shown that the Examiner erred in rejecting claim 12 as indefinite.

We conclude that the Appellants have shown that the Examiner erred in rejecting claims 1-5 and 7 as being anticipated by Ecktmann.

We conclude that the Appellants have not shown that the Examiner erred in rejecting claims 12 and 16-19 as being anticipated by Ecktmann.

### DECISION

The decision of the Examiner to reject claim 12 as being indefinite is not affirmed.

The decision of the Examiner to reject claims 1-5 and 7 as being anticipated is not affirmed.

The decision of the Examiner to reject claims 12 and 16-19 as being anticipated is affirmed.

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The decision of the Examiner to reject claim 20 as being obvious is affirmed.

No time period for taking any subsequent action in connection with this appeal may be extended under 37 C.F.R. § 1.136(a)(1)(iv) (2007).

AFFIRMED-IN-PART

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